viding contraception is used during the drug therapy and for four weeks thereafter. The hope is that newer retinoids will be discovered that may have less toxicity but retain clinical efficacy. Systemic retinoids are valuable drugs that need to be used cautiously by dermatologists skilled in their use. They represent a major advance in the management of patients with severe selected dermatoses.

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Liposuction in Dermatology

IN THE AMAZINGLY SHORT TIME since liposuction was first introduced to cosmetic surgeons in the United States, it has been standardized and vastly improved. American ingenuity and manufacturing preeminence have produced many new and better suction pumps and cannulas. Today a properly selected patient can safely have a liposuction operation under local anesthesia on an outpatient basis, although for patients requiring large amounts of fat removed, general anesthesia may be preferred.

Most office-based surgeons use a variation of the wet technique. A hypotonic saline solution, hyaluronidase, epinephrine and lidocaine are injected into the area to be suctioned. This provides adequate anesthesia, and the dilute epinephrine reduces the bleeding. The use of the wet technique seems to reduce or totally eliminate the problems with fluid balance and blood loss. It is not uncommon to stand a patient up during the procedure so that the gluteal crease and the lateral thighs can be accurately sculptured.

Narrower cannulas are generally used today: 4- and 6-mm cannulas for the trunk and proximal extremities and 3- and 4-mm cannulas for the submental and jowl areas. There are several new designs for the tips of the instruments, including a spatula-shaped tip, multiple ventral openings and partial frontal openings. All of these changes have made the operation physically easier for physicians and far less traumatic for patients.

As is true with most new techniques, the success rate goes up and the complication rate goes down as physicians become more knowledgeable in selecting patients. Nowadays, very gratifying results are consistently produced on the lower abdomen, the lateral thighs and the medial knees. Good results are commonly achieved on the upper abdomen, the medial thighs and the ankles. The "love handle" area requires more experience and judgment because often it is a fold of heavy skin rather than excess fat. Also, the results after suction of that area may take as long as 12 months before the full benefit is achieved.

Liposuction can be used alone or in conjunction with a face-lift procedure for the submental and jowl areas. Many surgeons use liposuction as an adjunct to the face-lift procedure, both to improve the results and also as a technical aid to cleaning fat from the platysma muscle or undermining the cheek flap.

Some giant lipomas can be treated with liposuction. Male gynecomastia will respond to such treatment. Occasionally the lateral and medial arms have a fat collection that is successfully treated by liposuction.

The major complications include fluid loss, blood loss, infection and hematoma. Some of these complications have been catastrophic, with infections leading to disseminated intravascular coagulation, and there are reports of deaths due to pulmonary emboli. There are also reports of visceral perforation. As tragic as these events are, the incidence is low and the causes are presumed to be associated with poor surgical judgment, poor follow-up, inadequate fluid replacement or inadequate attention to sterility. Almost all of these major complications have occurred in patients who were treated in a hospital general surgery or come-and-go surgery. The experience to date thus does not support the contention of those malpractice insurance carriers who want to limit their coverage to only those physicians with hospital privileges for liposuction operations.

Minor complications include irregular or wavy skin. Most of the time this will soften in 6 to 12 months. Numbness is one of the most common complications, but its incidence does not exceed 5% of patients. The frequency of all of these complications is acceptably low in exchange for the gratifying results in an area where previous techniques were woefully inadequate.

Liposuction has made us aware that body fat differs genetically. Some areas are slow to catabolize by ordinary diet restriction. Studies are under way to examine the metabolic variation of localized fat collections and to assess the overall effect on metabolism when selected amounts of fat are removed.

This procedure is appropriately gaining popularity as the medical profession is better able to select and deliver satisfactory results in a safe setting. Many persons with figure fault deformities have had to deal with the social consequences. Before liposuction procedures, such persons had to live in a semistarved state, and even that was not always helpful.

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Using Lasers in Skin Surgery

LASER IS AN ACRONYM for *l*ight *a*mplification by *s*timulated *e*mission of *r*adiation. The basic principle of lasers is that a high-intensity monochromatic collimated beam is directed to target tissue and produces localized tissue injury.

The most commonly used apparatus today is the carbon dioxide laser, which emits a beam in the far infrared portion of the light spectrum. This laser light is absorbed by water and produces localized tissue vaporization or coagulation as the tissue is rapidly heated. The other frequently used laser is the argon laser, which produces a blue-green light in the visible spectrum that is selectively absorbed by hemoglobin and results in coagulation.

The CO_2 laser has a wide variety of uses in dermatology, including vaporizing benign cutaneous neoplasms and warts, excising skin cancers, removing superficial pigmented lesions such as lentigines or seborrheic keratoses, removing tattoos and excising vascular proliferations such as port-wine stains

or cavernous hemangiomas. The argon laser is mainly used to ablate vascular malformations and vascular tumors, but is also used to treat some benign pigmented lesions, warts, benign tumors and tattoos.

Laser ablation of abnormal tissue does not differ qualitatively from other modes of tissue destruction. There are, however, a number of important advantages to this mode of treatment. Extreme localization of the beam minimizes perilesional injury. The laser is excellent at cauterizing small blood vessels so that a dry operative field and reduced postoperative edema are obtained. The wound is sterilized by the laser beam and, thus, one may operate in a contaminated field. In addition, postoperative pain is often less than with other destructive procedures because small nerve endings are sealed.

There are several disadvantages to laser surgical procedures. The equipment is expensive and not highly portable. In addition, it is technically sophisticated and, thus, may be prone to major malfunctions. Because the beam is so powerful, human error in its use can lead to significant cutaneous burns or eye injuries.

The near future should bring greater use of a newly developed tunable dye laser that uses a carefully chosen wavelength (577 nm), which is very selectively absorbed by blood. Thus, abnormal vascular channels can be ablated without damaging surrounding normal structures.

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Dysplastic Nevi—Markers and Precursors of Malignant Melanoma

THE INCIDENCE of malignant melanoma is doubling every decade and will affect 25,800 Americans this year, of whom 5,800 will die. No effective treatment is currently available for those with metastatic disease, the only cure for melanoma being early detection and prompt surgical excision.

More than half of those in whom melanoma develops are marked by a recently discovered, clinically distinctive type of nevus that shows histologic dysplasia. "Dysplastic" nevi often appear during adolescence, giving alert clinicians time to spot affected persons and to train them in self-examination and periodic professional examinations in time to intercept developing melanomas during the highly curable, superficial radial growth phase. Inheritance is autosomal dominant with a high degree of penetrance but with a great variety of phenotypic expression, varying from more than 50 large, irregularly pigmented lesions in more severely affected cases to the more common presentation of several or even solitary small, subtle lesions within the same family. Unlike common nevi, dysplastic nevi may continue to appear lifelong, past young adult years.

Any "new" or changing nevus occurring after age 30 should be carefully examined for evidence of melanoma or dysplasia. Identification requires bright, close, tangential, incandescent illumination (preferably halogen) within 30 cm (12 in) of the skin with an examination lamp. Gently stretching the skin unfolds the skin creases, revealing early signs of border irregularity or suffusion of pigment into surrounding skin, speckled or irregular patterns of brown, black or faint pink and sometimes a relatively lighter pigment in those creases. Most dysplastic nevi have at least a small ring of flat pigment surrounding them, and many are only minimally elevated. Confirmation requires histologic examination, preferably of two or three of the most suspicious lesions. In patients with the dysplastic nevus syndrome, about a third of melanomas arise from the dysplastic nevi themselves, a third from normal-appearing nevi and a third apparently de novo from the surrounding skin.

In families with several members affected with dysplastic nevi and with a history of multiple melanomas, an affected person's risk of melanoma developing by age 59 may be 56%. As much as 7% of the white population in the United States may be affected with dysplastic nevi but are without a family history of multiple melanomas. The lifetime risk of melanoma in these persons is under investigation and has been estimated at 6%, high enough to warrant monthly self-examinations, periodic professional complete skin examinations and precautionary sun-exposure and sunburn-reducing techniques. Family screening of their relatives by the author in a collaborative study with the National Cancer Institute has detected some previously undiagnosed melanomas.

For color photographic resources, write to:

- The Skin Cancer Foundation, 245 Fifth Ave, New York, NY 10016.
- The Atypical Mole and Melanoma Education Foundation, PO Box 2099, Napa, CA 94558.
- Norcal Mutual Insurance Company, Loss Prevention Dept, 333 Market St, San Francisco, CA 94105 (videotape entitled "Melanoma: A costly oversight.")

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Contraindications for Using Topical Steroids

IN PRESCRIBING the topical use of steroids, physicians must be aware that there are certain conditions when topical steroids are relatively or absolutely contraindicated. They must also be alert to the fact that any steroid, and in particular potent and superpotent agents, may in themselves cause topical and systemic side effects.

Using topical steroids to treat primary bacterial infections is not only *absolutely contraindicated,* but the steroid may mask the bacterial infection by its vasoconstrictive and anti-inflammatory properties, making diagnosis and treatment even more difficult. Impetigo, furuncles and carbuncles, paronychia, ecthyma, erysipelas, cellulitis, lymphangitis and erythrasma are all conditions in which the use of topical steroids is to be avoided.

Some eczematous dermatoses, blistering eruptions and papular urticaria due to bites—such as scabies—may become secondarily infected. These macerated, inflamed lesions may be treated with topical steroids in conjunction with an appro-